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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/841,459	04/24/2001	Mark N. Robins	10011502-1	5364

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HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER	
HANNETT, JAMES M	
ART UNIT	**PAPER NUMBER**
2612	2

DATE MAILED: 08/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/841,459	ROBINS ET AL.	
	Examiner	Art Unit	
	James M Hannett	2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *4/24/2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *24 April 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

1: Claims 1-4, 8, and 9 are rejected under 35 U.S.C. 102(a) as being anticipated by EP-1-067-778-A2 Hamada.

2: As for Claim 1, Hamada teaches on Paragraphs [0004-0005] a method for generating a multiple exposure in a digital camera, the method comprising: entering a multiple-exposure mode in the digital camera; capturing a plurality of digital images; and automatically combining the plurality of digital images to generate the multiple exposure.

3: In regards to Claim 2, Hamada teaches on Column 2, Lines 6-7 saving the multiple exposure.

4: As for Claim 3, Hamada teaches on Column 2, Lines 13-21 and on Paragraph [0011] automatically combining the plurality of digital images to generate the multiple exposure comprises weighting and summing the plurality of digital images.

5: In regards to Claim 4, Hamada teaches on Column 2, Lines 13-21 each of the plurality of digital images is weighted by the reciprocal of the number of digital images being summed.

6: In regards to Claim 8, Hamada teaches on Paragraph [0015-0016] the plurality of images are captured at time instants distributed within a predetermined period.

7: As for Claim 9, Hamada teaches on Column 2, Lines 13-21 each of the plurality of digital images is weighted by the reciprocal of the number of digital images being summed, this is viewed by the examiner as the plurality of digital imaged is darkened prior to automatically combining the plurality of digital images to generate the multiple exposure.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8: Claims 10-15 and 17-19 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 2000-056358 Maruyama.

9: In regards to Claim 10, Maruyama teaches in the abstract and on Paragraph [0005] and [0010] a method for generating a multiple exposure in a digital camera, the method comprising: displaying simultaneously a background digital image and a superimposed preview image; capturing a digital image of the preview image; and combining the background digital image and the digital image of the preview image to generate the multiple exposure.

10: As for Claim 11, Maruyama teaches in Paragraph [0009] that the multiple exposure is saved in memory.

11: In regards to Claim 12, Maruyama teaches in Paragraph [0008-0010] the background digital image comprises a composite of a plurality of digital images.

12: As for Claim 13, Maruyama teaches in Paragraph [0007-0010] a digital camera, comprising: an optical system (taking lens); an imaging device (15) for converting optical

imaged received from the optical system to corresponding digital images; a memory for storing the digital images (26); and a controller configured for combining the digital images (22).

13: In regards to Claim 14, Maruyama teaches in Paragraph [0041-0043] a display configured for displaying simultaneously a first digital image and a superimposed preview image.

14: As for Claim 15, Maruyama teaches in Paragraph [0018 and 0065] that different numbers of exposures can be captured to perform a multiple exposure, therefore, it is inherent that the camera include an input device for specifying the number of digital images to be combined.

15: As for Claim 17, Maruyama teaches in Paragraph [0007-0010] a digital camera, comprising: means for collecting optical images (taking lens); means for converting the optical images to corresponding digital images (15); means for storing the digital images (26); and means for combining the digital images (22).

16: In regards to Claim 18, Maruyama teaches in Paragraph [0041-0043] a display configured for displaying simultaneously a first digital image and a superimposed preview image.

17: As for Claim 19, Maruyama teaches in Paragraph [0018 and 0065] that different numbers of exposures can be captured to perform a multiple exposure, therefore, it is inherent that the camera include an input device for specifying the number of digital images to be combined.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

18: Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP-1-067-778-A2 Hamada

19: As for Claims 5-7, Hamada teaches the use of a digital camera that can produce multiple exposure images. However, Hamada teaches weighting each of the images in the multiple exposure image by the reciprocal of the number of images in the multiple exposure image, and does not specifically teach that other weighting schemes can be used.

Official notice is taken that it was well know in the art at the time the invention was made that when forming a multiple-exposure image, to allow the user of a camera to set different exposure times for the different exposures in a multiple exposure image in order to allow the user to combine images that require different shutter times in order to see detail such as an image captured at night and an image captured under high lighting conditions.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to weight more heavily (by means of changing the exposure time) any of the images in the series of images captured for the multiple exposure, in

order to see detail such as an image captured at night and an image captured under high lighting conditions.

20: Claims 16 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2000-056358 Maruyama in view of EP-1-067-778-A2 Hamada.

21: In regards to Claim 16, Maruyama teaches the claimed invention as discussed in Claim 13, However, Maruyama does not teach specifying a weighting factor for each of the digital images to be combined.

Hamada teaches that each of the images in the multiple exposure are weighted equally by the reciprocal of the number of images captured. Therefore, teaches specifying a weighting factor for each of the digital images to be combined. Hamada teaches that this method is advantageous because it prevents deterioration of the signal to noise ratio of the output image and prevents overflow of a memory capacity.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made weight each of the images in the multiple exposure by the reciprocal of the number of images captured in order to prevent deterioration of the signal to noise ratio of the output image and prevents overflow of a memory capacity.

22: In regards to Claim 20, Maruyama teaches the claimed invention as discussed in Claim 13, However, Maruyama does not teach specifying a weighting factor for each of the digital images to be combined.

Hamada teaches that each of the images in the multiple exposure are weighted equally by the reciprocal of the number of images captured. Therefore, teaches specifying a weighting factor for each of the digital images to be combined. Hamada teaches that

this method is advantageous because it prevents deterioration of the signal to noise ratio of the output image and prevents overflow of a memory capacity.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made weight each of the images in the multiple exposure by the reciprocal of the number of images captured in order to prevent deterioration of the signal to noise ratio of the output image and prevents overflow of a memory capacity.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. USPN 6,480,300 Aoyama; USPN 5,406,391 Takahashi teaches an image sensing apparatus having a tone correction function; JP-2000-261715 Iijima teaches the use of a digital camera that can perform multiple-exposure images; JP-2000-066087 Hata teaches the use of a digital camera that can capture multiple-exposure image.J-2001-028726 Omori teaches the use of a digital camera that can produce a multiple exposure image; JP 05-284420 Tsuruta et al teaches the use of a digital camera that has a multiple exposure function.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James M Hannett whose telephone number is 703-305-7880. The examiner can normally be reached on 8:00 am to 5:00 pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on 703-305-4929. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James M. Hannett
Examiner
Art Unit 2612

JMH
July 23, 2004

WENDY R. GARBER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600